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# Meaningful Learning for Holistic Student Development in UNIMAS

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## Dean Message

I wish to welcome all readers to this volume of INSIGHT. The theme for this volume is "Meaningful Learning for Holistic Student Development in UNIMAS". The Malaysian Higher Education Strategic Plan (*Pelan Strategik Pengajian Tinggi Negara [PSTPN]*, <http://www.mohe.gov.my/transformasi/>), encourages approaches to learning that empowers learners and prepares them to deal with complexity, diversity, and change. These meaningful learning approaches should provide learners with broad knowledge of the wider world (e.g. science, culture, and society) as well as in-depth study in a specific area of interest to help them develop a sense of social responsibility, strong and transferable intellectual and practical skills (such as communication, analytical and problem-solving skills), and a demonstrated ability to apply knowledge and skills in real-world settings. PSTPN listed nine pedagogical practices encompassing seminars and small group meetings of students and faculty, actively involving students in empirical research, final year capstone project, internship programme, collaborative assignment, diverse and global learning, service and community based learning, inter-disciplinary approach to assessment, and writing-intensive course.



This volume of INSIGHT shares lecturers' experiences and best practices on how they successfully integrate and implement elements of meaningful learning practices in their courses and work towards developing holistic undergraduates. It features five articles contributed by lecturers from the Faculty of Resource Science and Technology, Faculty of Economics and Business, Faculty of Engineering, and Faculty of Cognitive Sciences and Human Development. The first article "Final Year Project: The forgotten course" highlights the importance of the Final Year Project in providing students with holistic learning experiences in a program. Yet the article noted a lack of emphasis on the course in the teaching performance appraisal. The article suggests relooking at the implementation process of the course to enhance students' holistic learning experiences. It also recommends the need to adequately value lecturers' commitment towards the course in the appraisal system. In the second article "Creating spark of excitement among learners through active learning strategies", the author shares her experiences in integrating active learning strategies into large classroom instruction. She observes that integrating active learning activities promotes higher order thinking and results in better learning outcomes. The third article is titled "A fuzzy logic-based criterion-referenced assessment for engineering education". This article reports the use of fuzzy logic for criterion-referenced assessment at the Faculty of Engineering. It provides the rationale for using fuzzy logic and discusses the fuzzy logic-based system using an example of student laboratory work assessment. This fuzzy logic-based criterion-referenced assessment system was developed with financial support from FRGS, ERGS and RACE grants. The fourth article "Strategies for handling diverse learners" discusses some practical strategies that could be used by lecturers to cater to the learning needs of diverse learners in their lectures to make learning meaningful and fruitful. The issue of learners' diversity is important as students entering universities are increasingly diverse in terms of gender, age, prior educational qualification, nationality, culture, ethnicity, learning styles and learning abilities. In the last article "An approach to make an counseling ethics course meaningful for students", the lecturer shares her experiences in teaching the course. In particular she shares the approaches she used to make learning meaningful, as ethics is a challenging concept and construct to understand, learn and internalize.

Collectively, I am sure that these five articles provide ideas and provoke further thoughts on generating meaningful learning for holistic student development in UNIMAS. On behalf of the editorial board, I wish to thank all articles contributors for this volume of INSIGHT. We invite articles for our next volume with the theme "Scholarship of Teaching and Learning (SOLT): Challenges for academics". In this forthcoming volume, we would like to invite lecturers in UNIMAS to share their experiences with SOLT and how it affects their teaching and learning, research and professional development. Articles can be an output of research, a sharing of thoughts and experiences, or critical analysis of issues related to the theme.

Thank you  
Dean, CALM  
Prof Dr Gabriel Tonga Noweg



# Final Year Project: The forgotten course



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An undergraduate study, for most bachelors degree programme, would not be complete without a final year project. During my time, it was commonly referred to as an Honours Thesis Project. Today, however, in many Malaysian public universities, UNIMAS included, it is simply called a Final Year Project.

Though many lecturers discuss undergraduate student supervision routinely among themselves and every batch of students are stressed by it, Final Year Project seems to be a forgotten part of the curriculum when it comes to the agenda of measuring the quality and impact of teaching and learning by university administrators. This is especially so when the context of supervision focuses more on postgraduate programmes. The sadder fact is that the credit hour of final year project (which is rather substantial) is not taken into consideration when total credit hours of teaching by each academic are accounted for. It is as if neither teaching nor learning takes place in the final year project. To me, this situation is alarming and requires serious debate. Hence, this article discusses two key aspects on why Final Year Project represents the most holistic education approach and experience in the university, and that it should be properly recognised and accounted for when academics are evaluated on the quality and quantity of teaching and learning.

## **Comprehensive education**

For the students, a final year project is the application of knowledge learnt from most (if not all) previous courses/subjects. For the lecturers, it is the most comprehensive form of teaching (theoretical and practical) and assessment of student learning outcome (formative and summative). Although the pedagogical activity is not characterized by the conventional "chalk and board" scenario, it is the best model of a continuous training and evaluation mode. It does not entail the traditional testing strategy but requires a student to submit and improve on a given task or set of tasks over a period of time. Unlike a typical course where students



do not receive continuous feedback on their performance other than marks and/or grades of tests and assignments, a final year project proposal or report is reviewed multiple times by the supervisor(s) and examined by at least one examiner. Each time written feedback is given to students. Rarely do we have any assignment or test in a nominal course being evaluated by more than one instructor. In the course of carrying out their mini research, the students learn under the supervision of experts – a sort of apprenticeship style. In a nutshell, the learning process involves a closely monitored and continuously guided mode. These facets of education are, unfortunately, not seen by university administrators as valuable.

### **Holistic training**

Many skill sets are learnt in a final year project, other than the theoretical and practical aspects of the subject matter. Time management is especially crucial when students are required to complete their project within only one academic session. Team work is inculcated when they need to work closely with their seniors and supervisors. Leadership skills are emulated when they look upon their supervisors as academic mentors and role models. Networking bonds are built when they share experiences with their peers in the same research group. Working in a group and under the supervision of an academic mentor also provides the opportunity to hone interpersonal skill. Confidence building and public speaking skills are polished when the students present their proposals and final reports verbally. Analytical and critical thinking are part and parcel of the training. Competency in research writing and language proficiency will improve. When the students overcome setbacks and criticisms, emotional management and psychological strength will be fortified. Finally, the students are introduced to the realities of day-to-day activities in a research workplace and the professional conduct of a researcher. These include grant acquisition, project management, ethical consideration and regulation, and the publishing culture





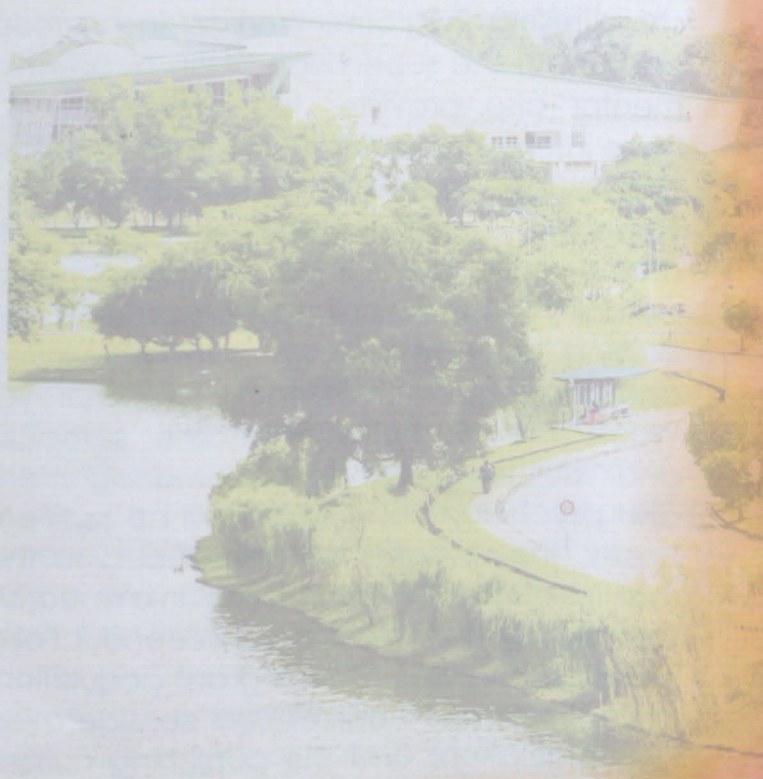
(including citation and ranking). Again, though many of these skill sets will equip the students for the real world, the teaching load associated with Final Year Project course is often deemed as trivial in comparison to any other given course.

My criticism that Final Year Project has been unfairly marginalised by university administrators (in appraising teaching load) may not sit well with some quarters, but it is not an unfounded censure. Despite the immense amount of time invested by the lecturers into supervision of final year students, it is somehow, not justified to be equivalent of regular taught courses. University administrators and management are oddly convinced that only courses that comprise largely of lectures as the main instructional methodology constitute legitimate investment of a lecturer's teaching effort, time and intellectual contribution. Any methodology outside of a classroom context is deemed as a secondary venture. In fact, it is an irony that teaching of elective and generic courses deserves greater recognition compared to final year project in terms of auditing credit hours in yearly teaching load.

In supervision load of final year students, it is accorded a much lesser value than supervision of postgraduate students. This is a flawed consideration in appraisal of staff performance. No doubt, postgraduate studies involve a greater and deeper pursuit of knowledge, but the supervisory role is more of fostering intellectual development. The training and monitoring of research method is no longer a basic requirement. More often than not, the academic relationship between a postgraduate student and his/her supervisor entails a bilateral intellectual experience. The learning event is a two-way affair. In the case of final year project students, more time and energy is invested by their supervisor in ensuring that the tenets of research method are learnt. The intellectual development process still requires a major role of lecturers in building the foundational content knowledge. Hence, the academic

experience is of a unilateral nature where the involvement and commitment of the lecturers is significantly more.

Beyond the concerns of the yearly appraisal in teaching performance, the lack of recognition on the value of Final Year Project supervision belittles the existence of the Final Year Project course in the eyes of students and academics. Lecturers may feel that it is a burden to supervise undergraduate students – an unrewarded duty that depletes the time, energy and resources of supervisors. Students, on the other hand, may lack the initiative to learn enthusiastically during their final year project in response to the lack of interest on the part of their supervisors. Since university administrators have already denied the Final Year Project course any credible value in credit hours accounting, it would appear that no parties in the university significantly appreciate this course. As such, the deliberate negation and negligence of final year project over time will hurl its existence to fall from being a forgotten course to an obsolete module. For now, such contemplation may be brushed off as outlandish, but we often appreciate the significance of things we have after we have lost them.





# Creating spark of excitement among learners through active learning strategies



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Underpinning the vision for the future of higher education, universities would need to become accountable for their quality in teaching and learning. The quality of teaching in higher education is not only about achieving the curriculum contents but also about getting the sparks of excitement among students in classroom discussions.

Active learning includes a wide range of activities that share the common element of involving students in doing things and thinking about things that they are doing (Bonwell & Eison, 1991). Active learning instructional techniques are important in university teaching because they indicate the capability of the instructors to engage with students. The traditional way of lecturing usually involves transferring information from the lecture notes to the students. The omnipresent of slides used in presentation has led students to anticipate routinely that they can have access to other slides in the e-learning system @ Morpheus. Furthermore, watching students today during lecture in both regular size classroom as well as large lecture halls will reveal significant proportions of students daydreaming, listening to iPods, instant messaging on cell phone, and interacting on Facebook; students are merely present physically. Those students who are really engaged and taking down notes are significantly small in number.

The lecture method seems to be a relatively poor instructional strategy in gaining students' attention. One of the common challenges why some lecturers find it difficult to engage students in active learning is because there is too much course content to cover within the time available. Many lecturers might be surprised to discover that lectures stretching over 50 minutes can be enhanced by lecturers pausing three times for approximately 3 minutes each time. By incorporating interactive learning strategies during these three short pauses, my students' examination performance has shown improvement. The pause procedure is an extremely easy and effective method to promote student engagement without modifying the traditional lecture style (Rowe, 1980, 1986; Ruhl, Hughes, & Schloss, 1980). During the pauses, engage learners with short discussion using collaborative activity such as think-pair-share. Learners and their peers can rework their notes without the educator-learner interaction. Short videos from YouTube and brief newspaper articles are some of the information sources as items of focus for their discussions. Think-pair-share is a collaborative learning strategy which is effective for large classes and allows students to be more reflective about the course content. Such engagement could foster students' higher order thinking skills and permit them to actively improve their communication skills.

Students learn better if the course content is integrated with outside classroom activities or events. Real life applications can create excitement and enhance students' learning. However, it would be quite difficult to implement such activities with 330 students in my EBS1013 course. An alternative method is to invite knowledgeable guest speakers from industries to augment formal course presentation and enhance students' motivation and inspiration. The



thoughtful selection of guest speakers can ignite students' interest to learn with lively presentations and discussions. My previous experiences include inviting guest speakers from Sarawak Information Systems (SAINS) and Bank Negara Malaysia (BNM), and these seminars were effective as students found that the talks from industry players enlightened their views on the real world business applications.

Another approach to capture students' attention in the classroom is by introducing weekly public speaking on "Breaking News" items found in the newspapers or social media. This oral presentation allows the students to be well prepared for every class. Connecting the course content with current events provide opportunities for students to do research before class and prepare them to answer questions posed by their classmates. This helps students to develop holistic awareness as they learn about the course content, share stories with their classmates and develop their personal skills.

Integrating debate into the course can also help students learn how to locate information, think critically, formulate persuasive arguments and express themselves verbally and non-verbally. Debate is a good form of active learning as it can arouse students' interest and engagement towards the subject. I found that my students could connect their personal opinions and course content when carrying out the debate. They were also able to cooperate during teamwork, and they displayed positive interdependence. This activity provided them opportunities to transfer knowledge and develop deeper self-awareness by valuing different views from their classmates. The debates helped them to respect cultural diversity and apply critical thinking skills.

When it comes to project or assignment presentation, it is common to observe the same students doing the presentations. I randomly selected students to present the assignment. However, for big groups of students, the end of semester presentations seemed to be ineffective; it is time consuming

and students become bored listening. With the increasing use of technology, a better way for assignment presentations is to get students to prepare a 5-minute video clip presentation on CD. The students generally find this exciting as it moves away from the traditional group presentations in class. Furthermore, they are encouraged to come up with creative ways of video presentations. Even though this activity takes up a little bit more time, students have found it to be worthwhile as it allows for brainstorming of ideas among group members. This activity also provides educators with more time in class for revision and other instructional activities within the time initially allocated for assignment presentation.

These personal experiences in the class suggest that active learning approaches move learners away from depending solely on the lecturers. The approaches also lead the students towards taking personal responsibilities for learning. Integrating active learning strategies can result in effective lecturing in large classes.

## References

- Bonwell, C.C., & Eison, J.A. (1991). *Active learning: Creating excitement in the classroom (ASHE-ERIC Higher Education Report No.1)*. Washington, DC: George Washington University, School of Education and Human Development.
- Rowe, M. B. (1980). Pausing principles and their effect upon reasoning in science. In F.B. Brawer (Ed.), *Teaching the sciences (New directions for the community colleges: No. 31)* (pp. 27-34). San Francisco: Jossey-Bass.
- Rowe, M. B. (1986). The pausing principle - Two invitations to inquiry, *Research on College Science Teaching*, 5, 258.
- Ruhl, K.L., Hughes, C.A., & Scholoss, P.J. (1980) Using the pause procedures to enhance lecture recall. *Teacher Education and Special Education*, 10, 14-18.



# A fuzzy logic-based criterion - referenced assessment for engineering education

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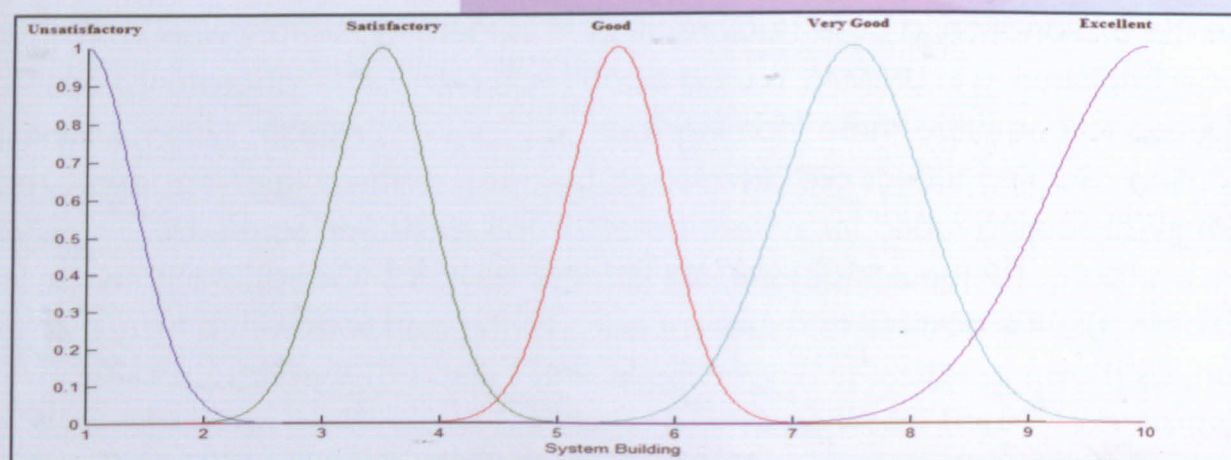
Assessment in engineering education is often conducted using criterion-referenced assessment (CRA) approach. CRA determines students' grades by comparing their achievements with a clearly stated criterion for learning outcomes and the standards for particular levels of performance are also clearly stated. A search in the literature reveals that various improvements on education assessment with the use of technology have been reported. Amongst the popular are computer-based assessment, web-based assessment and soft computing for education assessment. In this short article, a brief discussions of the author previous works relating to fuzzy logic-based CRA is presented. Fuzzy logic is a popular soft computing model. Fuzzy logic-based CRA was introduced for the following reasons: (1) scoring rubric criteria can be qualitative (rather than quantitative), e.g., a rubric score of 4 does not mean two times better than that of 2; (2) the relative importance of each test item can be different; and (3) various combinations of the scores from different test items can produce the same aggregated score, but the performance of the student can be different. Fuzzy logic is a solution for the above mentioned challenges.

To ease the explanation, a case study relating to student laboratory work assessment, for Electronic engineering in UNIMAS, is used as an example. In the laboratory work, students are required to complete three learning tasks, e.g., *system design*, *system building*, and *presentation*. Scoring rubrics are developed for each of these learning tasks. Table 1 is a summary of scoring rubric for *system building*. The rubric for *system building* is divided into five partitions, 1-2 (Unsatisfactory), 3-4 (Satisfactory), 5-6 (Good), 7-8 (Very Good) and 9-10 (Excellent). It is possible to represent each of the partitions with a fuzzy membership function, as shown in Figure 1. For example, the criteria of the fifth partition, i.e., "*PCB: Demonstrated excellent solder techniques (No cold solder joints, no bridge joints and all components leads were soldered to the pad). Components are installed on the PCB correctly. Circuit fully operated as expected. Project board: All the components, jumpers and cables are well-arranged and tidy. Circuit fully operated as expected.*" is represented by a membership function with label "Excellent" in Figure 1.



**Table 1. Scoring Rubric for electronic circuit building**

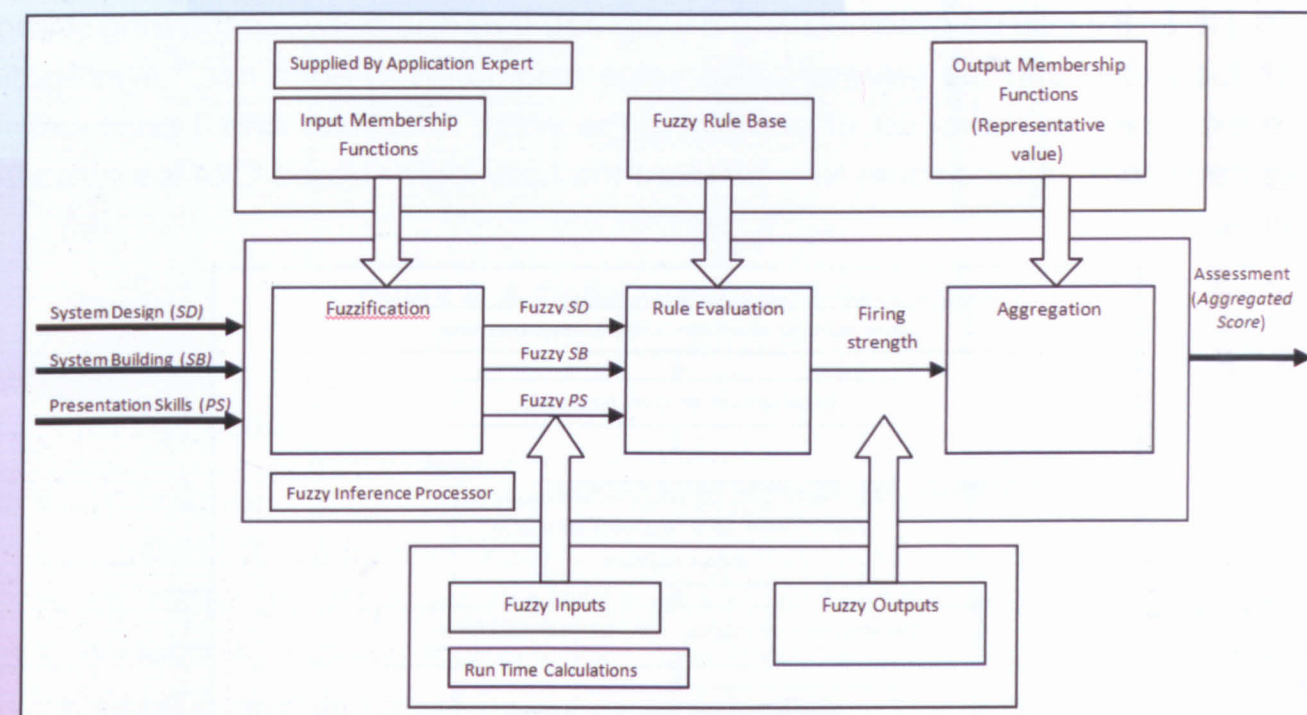
Rank	Linguistic Terms	Criteria
10-9	Excellent	PCB: Demonstrated excellent solder techniques (No cold solder joints, no bridge joints and all components leads were soldered to the pad). Components are installed on the PCB correctly. Circuit fully operated as expected. Project board: All the components, jumpers and cables are well-arranged and tidy. Circuit fully operated as expected.
8-7	Very good	PCB: Demonstrated good solder techniques (Some cold solder and bridge joints, some components leads were not soldered to the pad). Components are installed on the PCB correctly. Circuit operated as expected. Project board: Most of the components, jumpers and cables are well-arranged and tidy. Circuit operated as expected.
6-5	Good	PCB: Demonstrated good solder techniques. (Some cold solder and bridge joints, some components lead were not soldered to the pad). Some components are not installed correctly. Some parts of circuit malfunction. Project board: The components are well-arranged but jumpers and cables are messy. Some parts of the circuit malfunction.
4-3	Satisfactory	PCB: Demonstrated poor solder techniques (Many cold solder and bridge joints and many components leads were not soldered to the pad). Some components are not installed correctly. Most parts of circuit not function. Project board: The arrangement of components, jumpers and cables are messy. Most parts of the circuit malfunction.
2-1	Unsatisfactory	PCB: Demonstrated poor solder techniques. (Many cold solder and bridge joints and many components leads were not soldered to the pad). Most of the components are not installed correctly. The circuit totally not functions. Project board: The arrangement of components, jumpers and cables are very messy. The circuit totally not functions.



**Figure 1 Membership Functions for System Building**

Fuzzy logic is an alternative approach for aggregating the scores for each learning task for achieving a reasonable aggregated score. The aggregated score was represented by

seven fuzzy membership functions which are "Very Good", "Good", "Fair", "Weak", "Very weak", and "Unsatisfactory" respectively. The general framework of a fuzzy logic –based CRA for the laboratory project is depicted in Figure 2. It can be explained as a mimic of human reasoning. The relationship between the three tasks and the aggregated score could be represented with a set of *If-Then* rules where the aggregated score varied from 1 to 100. For example, Rules 1 and 2 in Figure 3 showed a part of the fuzzy rule base.



**Figure 2. Architecture of a fuzzy logic –based CRA**

Rule 1

If System Design is **Good** and System Building is **Good** and Presentation Skill is **Unsatisfactory** then Aggregated Score is **Weak**

Rule 2

If System Design is **Very Good** and System Building is **Very Good** and Presentation Skill is **Good** then Aggregated Score is **Good**.

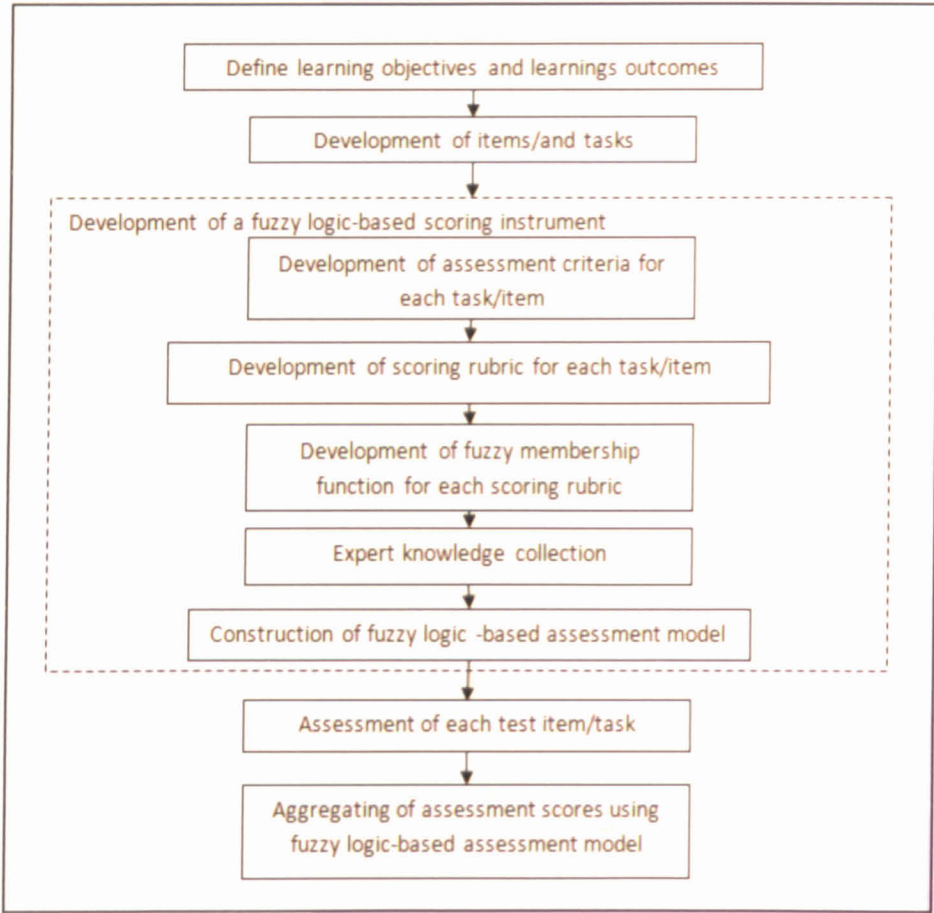
**Figure 3. Part of the fuzzy rule base**

A student with scores of [SD,SB,PS] (system design, system building, and presentation skill, respectively) is considered where  $1 \leq SD, SB, PS \leq 10$ . In the fuzzification process, these scores are used to convert each of the membership functions of the system design, system building, and presentation skill, respectively into the fuzzy representations that can then be matched with the premises of the rules in the rule base. Matching of each of the SD, SB, PS with membership functions of the system design, system building, and presentation skill are labeled as Fuzzy\_SD, Fuzzy\_SB and Fuzzy\_PS in Figure 2.



The rule base describes the performance of each combination of *system design*, *system building*, and *presentations skill*. For example, from Figure 3, #Rule 1 describes the combination of *System Design* is **Good** and *System Building* is **Good** and *Presentation Skill* is **Unsatisfactory**. Rule evaluation considers the *Fuzzy\_SD*, *Fuzzy\_SB* and *Fuzzy\_PS* and produces a numerical value, namely *firing strength* for each of the fuzzy rule. A *firing strength* is a measure of matching between SD,SB,PS and a fuzzy rule. *Firing strength* is further used for aggregation process.

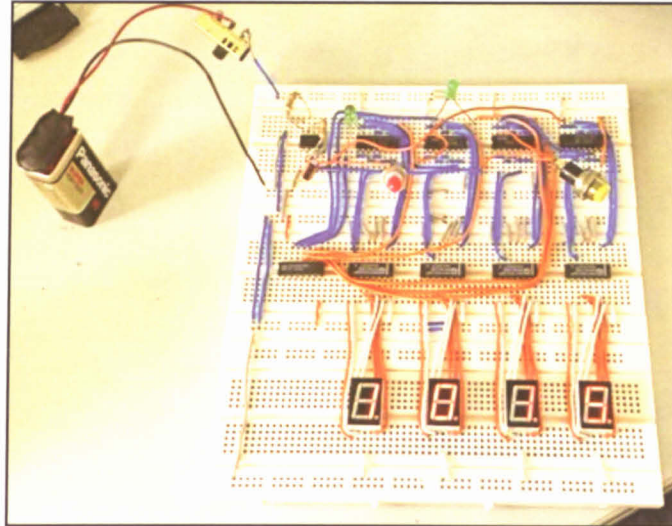
The consequent of #Rule 1 is **Weak** with representative value of **40**. The fuzzy logic based CRA uses 'sum-product inferencing' to calculate the aggregated score. Aggregated score for [SD,SB,PS] can be obtained with a weighted average between the *firing strength* of each fuzzy rules and the representative value associated to each rule. Aggregation can be explained as a process of combining the entire fuzzy rules and it produces the *aggregated score*. A procedure to implement the fuzzy logic –based CRA is summarized in Figure 4.



**Figure 4. A fuzzy logic-based CRA procedure**

Figure 5 depicts one of the completed projects. This project was given a score of 10 for *system design* because it consisted of more than ten integrated circuits (ICs), and the student was able to simulate and clearly explain the operations of the designed system. The student was given a score of 9 for *system building* as the system worked well, and all electronic components were installed on the breadboard correctly. Besides, all the components, ICs, and jumpers were well-arranged on the breadboard. The circuit was fully operated as expected. The student was also awarded a score of 8 for *presentation*. The aggregated score obtained by the student was 94.





**Figure 5 A digital system built by a student**

### Acknowledgements

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### Future Readings

Jee, T.L., Tay, K.M., & Ng, C.K. (2013). A new fuzzy criterion-referenced assessment with a fuzzy rule selection technique and a monotonicity-preserving similarity reasoning scheme. *Journal of Intelligent and Fuzzy Systems*, 24 (2), 261-279.

Jee, T.L., Tay, K.M., & Ng, C.K. (2012). Enhancing fuzzy inference system-based criterion-referenced assessment with a similarity reasoning technique. In Khairiyah Mohd-Yusof, Naziha Ahmad Azli, Azlina Mohd Kosnin, Sharifah Kamilah Syed Yusof, & Yudariah Mohammad Yusof (Eds.) *Outcome-Based Science, Technology, Engineering and Mathematics Education: Innovative Approaches*, 302-327.

Tay, K.M., & Lim, C.P. (2011). A fuzzy inference system-based criterion-referenced assessment model. *Expert Systems With Applications*, 38(9), 11129-11136.





# Strategies for handling diverse learners



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This paper intends to share some current teaching experiences and knowledge which I gained based on readings while conducting Postgraduate Diploma in Teaching in UNIMAS, and recollection of my past experiences in primary and secondary schools in Sarawak. All of us ought to be aware that in the Sarawak context, the populace is diverse and this is equally and truly reflected in our very own student population here in UNIMAS. Our students differ in performance level, learning rate, learning styles as well as in ethnicity, culture, social economic status, and the language they speak at home. In addition, they differ in gender, some students are gifted or talented in one or more areas and some have disabilities. The diversity context in our case is further made complex by the presence of international students who come to study along with our students. They bring along with them differences in culture, languages, beliefs, socio-economic background, and learning styles, to name a few. Therefore, diversity has several dimensions that impact learning and should be catered for in order to create an effective learning environment. Hartnett, Bhattacharya and Dron (2007) classify diversity among learners into clusters with each cluster having diversity dimensions, as illustrated in Table 1 below.



Table 1. Diversity clusters

Cluster label	Diversity dimension
Learning driving force	Motivation, expectations, and behavior
Context	Cultural, educational, and social
Core personal attributes	Personal philosophy, perception of self, beliefs, and values
Community building	Community, society culture, interaction mode, and communication expectations
Learner attributes	Educational background, learner control (emotional and psychological), approach to learning, goal orientation, Skills / abilities Roles and responsibilities

Source: Adapted from Hartnett et al. (2007)

Soo (2010) provides a broad definition of student diversity. The definition includes dimensions such as, (i) age, gender, indigenous, sexual orientation, ethnicity and faith; (ii) education background, learning style, English proficiency, entry pathway; (iii) thinking skills, physical ability, interpersonal skills, communication skills, and psychomotor skills; and (iv) urbanite/ rural, international/ local, funding status, and life style. In the context of UNIMAS, the diversity of student is consistent with that of Soo's (2010) definition, implying that the diversity lies in all of the four dimensions.

To cope with such diverse background of students, lecturers of UNIMAS need to be alert to the different needs of our students. Lecturers need to come up with a repertoire of strategies to cope with the diverse demand of our students. This paper will next discuss some of the practical strategies that could be used by lecturers to handle the diversity of learners in their lectures. The strategies discussed here are not meant to be exhaustive.

### **Demonstration of high expectations among learners**

Expectations can be said as internal processes which arise from our belief system and values. Research indicates that with diverse students, low teacher expectation is a major contributor to the achievement gap. Therefore, educators must have the willingness to explore the kind of beliefs, attitudes, and assumptions that lead to low expectation and to accept responsibility for the influence such expectations have on our student learning. Hence, strategies must be formulated to get student expectations at the correct level to enhance their learning. Examples of these are (a) students are taught challenging, rigorous curriculum in ways that capitalize on the strength of their learning styles which are diverse, (b) students are provided with praise for their effort to foster motivation to and responsibility for their own learning, (c) students are given opportunity to reflect the belief that "all of them can learn to high levels", and our students are believed to be "at promise", not "at risk", (d) students are asked high-level, open-ended questions which need them to interpret, analyze, synthesize, and evaluate, (e) lecturers need to demonstrate persistence in their



efforts to assist students meet standards by adapting teaching approaches to meet the needs of each student, (f) lecturers provide equitable opportunities for students to respond and participate in their learning, (g) lecturers provide ample wait time for thinking and responding, and not demand for immediate responses, and (h) lecturers ought to provide specific and timely feedback to students about their work and progress.

### **Implementation of culturally relevant instruction**

Culturally relevant instruction according to Shade, Kelly and Oberg (1997) includes (a) using the language and understanding that students have acquired in their families and communities to bridge the gap between what students know and are able to do and what they need to learn in learning institution, (b) incorporating the daily issues and concerns of families and the community in curriculum and instruction, (c) actively engaging students in the learning process, and (d) using equitable grouping practices. Shade et al. suggest that culturally responsive instruction is the essence of education and should not be dismissed as just good teaching.

This is further enhanced by engaging cooperative learning. It is reported that research has consistently endorsed the use of structured cooperative learning as a major strategy for teaching diverse learning environment. Cooperative learning provides students with opportunities to use language in meaningful, purposeful and interesting ways, build self-esteem and self-confidence, and develop academic, communication and social skills. This is achieved through (a) room facilities arrangement that facilitate collaborative learning between students although this is hard to come by in as far as UNIMAS is concerned, as such ideal facilities are limited, (b) group work practices are organized in a variety of ways that include mixed academic achievement, interest, language, project and friendship, even to the extent of group composition to reflect the 1 Malaysia concept, (c) small group work is structured so that students need to be concerned about the learning of all group members as well as themselves, where groups are expected to help and encourage their members to master academic content, and this ought to be monitored by lecturers, (d) each student in the group is individually accountable for their learning, and (e) explicit collaborative skill instruction occurs regularly and groups consistently process how effectively they work and learn together.

### **Cognitively guided instruction**

Another equally important strategy is the use of cognitively guided instruction. The teaching of cognitive strategies scaffolds instruction for students and enables them to self-monitor learning and to know how to navigate successfully through difficult learning situations. This includes the use of (a) 'think aloud' regularly to model meta-cognitive thinking for students, and (b) lecturers who consistently model cognitive strategies and insist that students practice them until they can use them in some novel situations. A further relevant instruction comprises that of technologically-laden instruction. For example, lecturers facilitate student active engagement in their learning through the use of multimedia and e-learning.

### **Caring relationship**

The establishment of a caring relationship as a strategy can also be used to handle students' diversity in learning. Corner (n.d. cited in <http://www.montgomerydchooldmd.org/>) stated that no significant learning can occur without a significant relationship. Caring relationship between lecturers and students are not decorative but integral to academic success. In



effective classrooms, the strength of every student is recognized, respected and valued as students and lecturers share the roles of expert, researcher, teacher and learner. Among the many strategies of a caring relationship are (a) a mentoring program in place to build a sense of personal efficacy and community connection, and this is practiced by the faculties in UNIMAS, (b) leadership is shared among students in collaborative learning activities, (c) students have access to and are encouraged to participate in extra-curricular activities in campus, and (d) routines and procedures are made clear and consistent to students.

## Conclusion

In conclusion, with the diverse composition of students, lecturers ought to be sensitive towards the varied needs of our students. The strategies shared are not meant to be exhaustive. Lecturers may pick strategies which work in their context while others may combine certain strategies with innovations and creativities of their own. What really matters is our ability to make learning meaningful and fruitful and students are able to develop wholesomely before graduating from UNIMAS.

## References

- Hartnett, M., Bhattacharya, M., & Dron, J. (2007). Diversity in online learners: Searching for differences that may matter. In the *Proceedings of the Seventh IEEE International Conference on Advanced Learning Technologies (ICALT 2007)* (pp. 899-900). Niigata: IEEE
- Shade, B., Kelly, C. & Oberg, M. (1997). *Creating culturally responsive classrooms*. Washington, D. C.: American Psychological Association.
- Soo, T. K. (2010). *Engaging diverse students in learning*. Paper presented in Seminar for Higher Learning (Monash University Sunway Campus, Kuala Lumpur, Malaysia, October 7, 2010).



# An approach to make counselling ethics course meaningful for students

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It is common among counseling students to depend on an attitude of fear-based ethics to obey the law statutes and follow the counseling ethics codes in their counseling practices. Thus, introducing students to ethics is both challenging and interesting. I have also come across students who continuously ask thought-provoking questions about counseling ethics. In my practicing and teaching career, I have encountered a variety of professional and ethical issues that seem to have no clear-cut solutions including while teaching and facilitating counseling ethics course for counseling undergraduates. The counseling ethics course looks at strategies in working through an ethical dilemma and also facilitates critical thinking in terms of assessing students' attitudes and beliefs related to a range of ethical issues. There are students who ended frustrated because they struggled with the ethical dilemma and perceived themselves as not having acquired ethical decision making attributes and skills from the course. My expectation of the course and the counseling program is that at the end of the students' undergraduate training, they will be able to demonstrate ethical competencies and uphold the integrity of the counseling profession. My personal struggle and efforts is on ensuring that my students are able to acquire these outcomes through meaningful learning in the counseling ethics course.

I believe that it is imperative to educate the students on making ethical decisions from the very beginning of their education as counseling students.

In the program, counseling students are required to conduct their counseling practicum, supervised by their assigned instructor. They are taught to learn to be aware of any ethical problems in their fieldwork experiences and discuss the problems in supervised sessions on an individual or group basis. There is no doubt that learning on ethics is a life-long learning process. Thus, counseling ethics should be infused into every aspect of the counseling training program.

The activities within the ethics course can be used to discover ethical and legal issues that students might not have looked for. Some of my proactive students have been using the ethics course as a medium to scrutinize ethical issues that they faced during their fieldwork or practicum. These students are the ones who become actively involved in the learning process of the ethics course, expanding their ethical awareness and clarifying their values in dealing with the challenges of their work.

Rather than rely on one-way monotonous lectures, I incorporate other instructional methods in teaching the ethics course. Instead of having them memorize and regurgitate rigid indoctrination of rights and wrongs, I engage the students in the learning process and require them to reason about ethical issues. I bring in practical examples of ethical dilemma that students may eventually encounter, via case study and videos, to facilitate discussions in the classroom. This type of interaction allows students to voice their opinions and listen to one another. Through this interaction and discussion, students may come to realize that they might have breached some counseling ethics codes when dealing with their clients. To assist students develop their reasoning about ethical issues, they need to endorse a position and state their reasons for selecting their positions. They also have to listen to the reasoning of others on the same problem. I encourage them to focus on examining their own motivations, values, and behavior rather than developing a judgmental stance by critiquing the ethics of their peers. Another obstacle that has important ethical implication is that sometimes personal views may conflict with ethics codes. Beginning counselors and students may experience discomfort in working with clients due to difference in value systems between



themselves and clients. Some students ask about the necessity of putting value statement on the agreement between counselor and client. Often, students choose to reserve their value and become less alert to the subtle ways that they might be ethically insensitive to the individual they work with. Addressing such a situation may raise controversial and complex concern. Unfortunately, some issues cannot be resolved directly by the code of ethics. Ethics need to be understood within a cultural framework. There is an alternative that can be implemented in the counseling ethics course such as value exploration through group discussion besides supervision and personal therapy which are commonly conducted outside the ethics class. Please bear in mind that a counseling practitioner has to engage in on-going self-examination in relation with personal and professional values, ethics, and competence to develop a sense of responsibility to act in an ethically responsible manner. Self-examination is essential because counseling practitioners must have the ability to work with a range of clients with diverse world views and values.

The use of role play also benefits students' learning. Students are required to role play how they would deal with a client in a given vignette. This activity provokes lively discussion among students, generating multiple ideas on how to address the same ethical dilemma. As an instructor, I become involved by showing them how I might approach the situation after they have demonstrated their solution. My view is that learning by modeling can be effective as it helps to stimulate students' discussion of various ethical scenarios.

Invited guest speakers also give presentations on ethics in counselling. In addition, students are asked to conduct an interview with a registered or licensed counseling practitioner. Thus, in this ethics course, I aim to offer a diversity of perspectives in terms of addressing ethical issues and also provide opportunities for students to start building their professional network. It is crucial for counseling students to gain understanding about ethics through their interview with the counselors because they are the ones who deal with the hands-on experiences. One of the most important lessons that I would like students to learn from this activity is to cultivate a collegial spirit because in reality, they have to consult with their supervisors or their colleagues when faced with an ethically questionable situation.

In general, I like to be able to engage in open discussion with my students about my own and their ethical beliefs. It is hoped that students can gain the ability, courage, and confidence to work through an ethical situation after completing this course. Teaching the counseling ethics course is enjoyable and rewarding although ethics tends to be reactive than proactive as counselors typically respond to an ethical dilemma when it has already occurred. Students with a high level of reasoning will have an increased ability to analyze ethical dilemmas. I would like to highlight the concept of virtue ethics as a means to combat fear-based ethics. Virtue ethics can be defined as an approach that is focused on the traits of the counselor and non-obligatory ideals to which professionals aspire to on solving specific ethical dilemmas (Meara, Schmidt, & Day, 1996). Counselors with virtue ethics are concerned with what they believe is the

right thing to do and take responsibility of their action in the ethical decision making. The following are among questions that have been recommended when making virtue-based ethical decisions (Canadian Counseling and Psychotherapy Association, 2007): (a) What emotions and intuition am I aware of as I consider this ethical dilemma and what are they telling me to do?; (b) How will my decision affect other relevant individuals in this ethical dilemma?; and (c) What decision would best define who I am as a person? However, virtue ethics is not only in dealing with ethical situation as students should also integrate this approach and other conventional ethics approach to improve their competencies in having a sound ethical conduct.

Ethical practice is an integral component taught to students in training. Students who are committed to their education in the helping professions will be able to cultivate their ethical sense. The way they approach their academic life has a bearing on the way they will approach their professional career. If they are devoted to their counseling ethics studies on an intellectual, emotional, and behavioral level, they will eventually bring their enthusiasm in their educational process as well as their professional practice.

## References

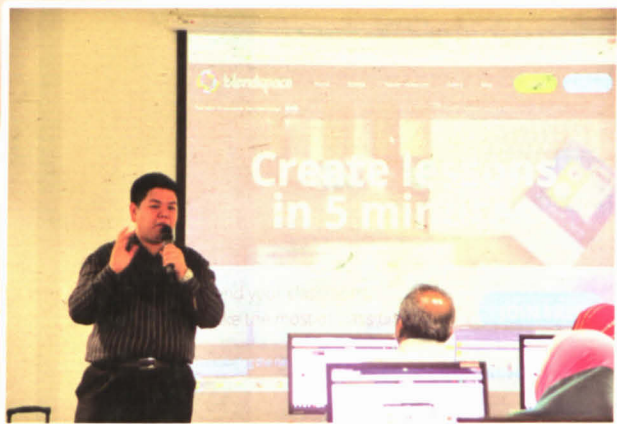
- Canadian Counseling and Psychotherapy Association (2007). *CCA code of ethics*. Ottawa: CCPA.
- Meara, N. M., Schmidt, L. D., & Day, J. D. (1996). Principles and virtues: A foundation for ethical decisions, policies, and character. *The Counseling Psychologist*, 24(1), 4-77.

## Suggested reading

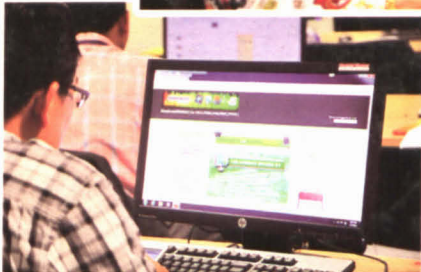
- Corey, G., Corey, M. S., Corey, C., & Callanan, P. (2011). *Issues and ethics in the helping professions* (9<sup>th</sup> ed.). Belmont, CA: Brooks/Cole, Ceng



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